abroad, for promises to pay dinners here on demand! At present the interchange is very unequal."

The New York *Evening Post*, says, "The operations in the building line have, at this early period of the year, advanced with great rapidity. Several old hotels are in course of being pulled down, to give place to more elegant structures, while the great increase in the rents of dwelling-houses has given rise to plans for the erection of a large number in the upper part of the city. In some localities, the demands of landlords are so exorbitant, that more removals will probably take place in May next than have been known for any previous year. Already there are hundreds of houses to be let. Dwellings that were formerly rented for the yearly sum of 400 dollars, cannot now be obtained for less than 450 or 500, while the rent of larger dwellings has been increased in proportion to their size. ——Mr. W. B. Astor has entered into contracts for the erection of about two hundred houses, from three to five stories high, in the vicinity of Forty-fifth-street, on the north side of the city, the outlay on which will not fall much short of 1,000,000 dollars.—— In Wall-street, the Atlantic and Sun Mutual Insurance Company intend building a large and elegant structure. The ground for this building, situated on the south-west corner of Wall and William-streets, extending on the latter street a distance of 98 feet, and running west 58 feet, has been purchased for about 294,000 dollars: this includes the price paid the present occupants for their leases.——Another large building will soon be commenced on Fourteenth-street, near Irving-place, by the Board of the Medical University, who have disposed of the edifice on Broadway, opposite to Bond-street, which is known as the Stuyvesant Institute. The new structure, which is to be built entirely of granite, in the massive Egyptian style, will form one of the most imposing public buildings in the city. The Tombs, we believe, is the only edifice of this description in the city. ——The aspect of Broadway will undergo a great change during the present year, if we may judge from the number of new buildings proposed to be erected. On the corner of this street and Liberty, a new brown stone edifice, the plans of which have been designed by Messrs. Thomas and Sons, architects, will be constructed on a scale of magnificence exceeded by few buildings in that part of the city. It will have a front on Broadway of 23 feet, and a depth of 115. Thompson's well-known confectionery establishment, near Park-place, will shortly be replaced by a large brown stone store, for Tracy, Irwins, and Co., dry goods merchants. On the south-east corner of Broadway and Wall-street, a handsome structure will soon be put under way. When completed, it is to be occupied by the Bank of the Republic. Two other banking houses are also to be built in the same street—one for the Mercantile Bank, to be situated on the corner of Broadway and John-street; and the other for the Broadway Bank, on the corner of Broadway and White-street. The directors of the Chatham Bank have purchased a lot on the corner of Duane-street, near Chambers, for about 28,000 dollars, on which they will erect a new building for the transaction of their business.

A writer in *Hunt's Magazine* says, "Boston, with less scope than New York, has, like New Orleans, Philadelphia, and London, over-stept her sea-girt isles. She has attached herself to the main by one wide natural avenue, the neck, paved and planted with trees, by one granite structure, the Western Avenue, a mile and a half in length; by six bridges, seven railways, and three ferries, one terminating in a railway. Seven railways branch into sixteen, and ten avenues divide into thirty within the first nine miles from her exchange. These diverge like a fan, and on the streets thus made is found a large population under separate municipalities. As land rises in value, hotels, offices, and blocks of stores usurp the place of dwellings. The old residents, leaving the low and reclaimed land to foreign labourers, plant themselves in the suburbs. There they build tasteful houses, with flower-plats and gardens; availing of the frequent omnibuses, or of special trains run almost hourly, and commuting for passage at 20 dollars to 40 dollars a year: they reach their stores and offices in the morning, and at night sleep with their wives and children in the suburbs. No time is lost, for they read the morning and evening journals as they go and return. If we would seek for a solution of the growth of Boston in commerce, wealth, and population, we may trace it not only to her central position and admirable harbour, but to the enterprise, intelligence, and frugality of her people. Her enterprise descends lineally from those bold ancestors who planted an empire in the wilderness. She has inherited alike their spirit and their love for letters. These have guided her enterprise. But it is one thing to acquire, and another to retain. The frugality which characterises the old Bay State is the great secret of accumulation. *Here every artisan aspires to own his house, and to leave a patrimony to his children.* Having secured his dwelling, he buys a single share in a bank, railway, or factory, and gradually becomes a capitalist."

"Our new institution," writes the Secretary of the Boston Art-Union, "is rapidly rising into favour, and we hope it will be the means of doing much good for art and artists in our country. The plan is considered the best that could be devised for the objects which we have in view. The Boston Art-Union provides that each drawer of a prize shall be at liberty to choose *both his subject and the artist he may desire to paint it.*" Good scope for jobbing here!

WATER.

The subject of *gathering grounds* for a water-supply to the metropolis having been recently very much considered, it is not maintained as an original idea that this necessary element can be obtained from a variety of springs or streamlets, or collected from waste lands, in a sufficient quantity for all the uses that a large town may require for it. The Romans have left us several examples, which have been steadily practised by the modern Italians; of tapping hills abounding with springs, and conducting them into a conduit or aqueduct, for the purposes of irrigation, as well as for the embellishment and uses of a city.

Alberti has a full account of the methods formerly adopted, and several recommendations of the best means to accomplish such an object, where water is required; but probably the most practical description is contained in the "Principi di Architettura Civile di Francesco Milizia," cap. ix. tomo secondo, published about seventy or eighty years since. Geology at that period was in its infancy, and could hardly be called a science; but to practical men the strata which were pervious and impervious were known, as well as the faults and fissures on the earth's crust, and experience had taught the qualities of water most approved, if it had not defined its chemical properties or degrees of hardness. The following is a literal translation of the chapter alluded to:—

MANAGEMENT OF WATER.

To collect several streams together, little wells are dug at the distance of from 25 to 30 feet from each other: they are united by trenches or canals, which receive the water and conduct it to its destination.

Before commencing the work, a level should be established, taking advantage of the natural slope of the earth, or one should be made to the bottom of the canal. The architect ought to be an adept in levelling. In cutting these trenches, care should be taken not to pierce the beds of gravel or clay which retain the water, otherwise it would be lost. Practice teaches many other precautions, which all the theories in the world cannot suggest. Dig the trenches to a convenient depth: give to the ground a slope according to its qualities: regulate the inclination of the bottom; and carry the branches at any distance and on either side in the form of a goose's foot: to unite as great a quantity of water as possible, another trench will be required to conduct the water from each well, in order that another may be made round its circumference with a stratum of earth 2 feet in thickness.

A wall must be built within in such a manner as to enable the water pumped from the wells to pass out through a cistern on a level with the other wells. Each well requires a discharge or a ditch to lead off the water when required: otherwise it would not be possible to work to the cistern. These wells require cleansing twice a year, to prevent cisterns and tubes being silted up by the deposit of the water or other matter. The cistern consists of two little walls of stone built upon a foundation of well-beaten clay: these walls ought to be 1 foot thick, and 1 foot 6 inches high, carrying it along the brink which forms a canal 8 feet 9 inches wide towards the commencement and the ditch. This canal ought to increase in width as the conduit lengthens and the water becomes more abundant. It must be covered with flat square stones, above which turf must be laid, reversed to impede the earth collecting and to prevent anything falling in. Thus the water which filters through the brink, not finding any obstacle passing through the joints of the cisterns, will flow into the conduit. Every fifty perches it will be necessary to build small wells or cesspools, of 3 feet in diameter and 5 or 6 feet deep, measuring from the foundation of the conduit. These cesspools serve to receive the sand and the deposits of the water: they should be lined with good brickwork laid in clay, so that the water do not escape. This being always full, the water easily flows into the next cistern. They must be covered with a large stone loaded with earth. These cesspools require cleaning twice a year. Marks should be placed on the top corresponding with those on the plan, which ought to be taken exactly, in case of any defects occurring in the works. No pits should be dug near the conduits, or the water will be drained away.

For the same reason no plantations should be allowed near, for fear the roots should penetrate into the conduit, and, destroying the brink, let the water escape. Tubes must be laid from the supplies to conduct the water to its final destination. These tubes must be made of wood or stone when depths or heights are inconsiderable, otherwise, from the velocity of the water, these tubes would be in danger of breaking. Where these obstructions occur tubes of iron must be substituted for wood and stone. The wood used for tubes must be oak, elm, or alder, as thick and long as possible: the diameter of bore must be according to the quantity of water which is to flow through them The pipe should be at least an inch thick without the bark or pith. The end of each tube should be inserted into the next, and every joint should be united by an iron ring, and cemented by mastic composed of mutton fat beaten in a mortar with brick dust to the consistency of soft wax. When holes and fissures occur they should be filled up with wooden wedges wrapped in tow and plastered over with mastic. The wooden tubes are generally 2 feet long and from 2 to 6 inches thick. When they are 7 lines thick they can resist the weight of a column of water 25 feet high. They should be inserted one within the other with a mastic made of pulverised cement, fine sand, or iron filings, mixed with an equal quantity of pitch, fat, and nut oil. For the thick tubes another mastic is used, composed of lime and powdered cement. Earthenware pipes may be used, glazed inside and outside, not less than two fingers in diameter; and one end should be narrower than the other, to enable them to fit into the next pipe: the joint is stuccoed with lime tempered with oil. All the tubes should be laid in ground that is well levelled, that the smallest obstacle to the free passage of the water may be removed. They ought to be laid in a trench sufficiently deep to prevent the frost and the sun penetrating. Before being covered they should be well tested. To this effect we must wall up the lower mass of stone of the conduit, and make it sustain the weight of a column of water somewhat higher than that which is to flow into it. The iron tubes, of

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